

APPENDIX J

Smog Check OBD II Reference (Testability Issues)

Appendix J provides information and test instructions about known OBD II functional test difficulties. Technicians must familiarize themselves with the information contained in this Appendix and follow the specified test instructions when conducting a Smog Check inspection on any vehicle listed.

Please watch for Appendix J updates on the Smog Check website or via ET Blasts. If other problems or solutions arise concerning the testing of OBD II vehicles, BAR will provide updated information advising technicians how to test the affected vehicles.

- **Table 1** lists known OBD II testability issues.
- **Table 2** lists CAN equipped vehicles that currently cannot be OBD II tested. The EIS should automatically bypass the OBD II test for CAN equipped vehicles. However, if the EIS prompts for an OBD II test, bypass the test by answering “No” to the OBD II functional test prompt. Unless otherwise instructed by BAR, do not answer “No” to bypass the OBD II functional test for any other OBD II equipped vehicles.

In addition to the vehicles listed in Table 2, all vehicles one model-year old and newer are excepted from the OBD II functional test. With each new calendar year, the exceptions change accordingly. For example: In 2006, all 2005 model-year and newer vehicles are excepted from the OBD II functional test. In 2007, the 2005 model-year vehicles are subject to the OBD II test and the exceptions change to 2006 model-year and newer.

Note: Once the BAR-97 EIS incorporates CAN communication protocol, these vehicles will become testable.

To ensure that any special test processes are appropriately applied, always select vehicle information (make, model, engine size, etc.) from the BAR-97 inspection menus.

TABLE 1 – OBD II Testability Issues

| Make | Model Year | Model | Problem | Action |
|-----------------------------------|---------------|---|--|--|
| Audi and Volkswagen | 1996-2002 | All models with non-OEM stereos | If the OEM stereo has been replaced with an aftermarket stereo, these vehicles may not communicate with the analyzer and/or OBD code scanner and may cause severe damage to the analyzer/scanner. For more information, see VW Technical service bulletin 02-03 dated June 10, 2002. | BAR recommends that you check with your analyzer/scan tool manufacturer to determine whether or not your analyzer/scan tool has complete current/voltage override protection. Override protection will protect the test equipment in cases where aftermarket installations cause over current conditions. BAR's June 22, 2002 ET Blast provides a method of checking for high voltage conditions using a test light. An alternative is to send all 96-newer VW/Audis with non-OEM radio installations to a VW/Audi dealership for verification of proper OBD function. |
| Chrysler | 1996 | Cirrus, Concorde, LHS, Sebring, Sebring Convertible | All monitors reset to "incomplete" upon <u>every</u> ignition key-off. | Determine if Recall Campaign #678 (9/96) has been performed; if not, refer to dealer. TSB 18-005-01 applies to non-California certified vehicles, and may be performed at no cost, even if warranty is expired. |
| BMW | 1995 and 1996 | 750iL, 850Ci, 850Csi 12-cylinder engines. | Only one or two monitors will set regardless of drive cycles. | Via VID communication, the test analyzer ignores monitor status; the monitors are not used for pass/fail decisions. |
| Dodge | 1996 | Avenger, Intrepid, Stratus, Neon | All monitors reset to "incomplete" upon <u>every</u> ignition key-off | Determine if Recall Campaign #678 (9/96) has been performed; if not, refer to dealer. TSB 18-005-01 applies to non-California certified vehicles, and may be performed at no cost, even if warranty is expired. |
| Dodge | 1996 | All 1996 Dodge Stealth models with 3.0L V6 engines | All monitors reset to "incomplete" upon ignition key-off <u>if all</u> monitors set to "complete" prior to ignition off. | Via the vehicle look-up process, the test analyzer automatically ignores monitor status; the monitors are not used for pass/fail decisions. No action on your part is necessary. |
| Eagle | 1996 | Talon, Vision | All monitors reset to "incomplete" upon <u>every</u> ignition key-off. | Determine if Recall Campaign #678 (9/96) has been performed; if not, refer to dealer. TSB 18-005-01 applies to non-California certified vehicles, and may be performed at no cost, even if warranty is expired. |
| Hyundai | 2002 | Sonata | Readiness monitors are difficult to complete. Must successfully complete drive cycle TWO times. | Hyundai TSB #02-36-030 applies. Hyundai TSB information at: < http://hmaservice.com/webtech > |
| Hyundai | 2003 | Tiburon | Will not communicate with generic OBD II test equipment. | A manufacturer recall is in effect; recall campaign #057 and Hyundai TSB #03-01-003-01. Refer to dealership for recall. |
| Table 1 continued on next page... | | | | |

| TABLE 1 – OBD II Testability Issues | | | | |
|-------------------------------------|------------|--|--|--|
| Make | Model Year | Model | Problem | Action |
| Infiniti | 1996 | All Models | The catalyst and evaporative monitors are difficult to set to "complete." | Nissan provides recommended drive cycles (drive patterns). See Nissan Technical Service Bulletin #NTB98-018, February 18, 1998. |
| Mercedes-Benz | 1996 | C220, E320, C280, S320, SL320 | The MIL illuminates whenever a scan tool is connected to the DLC. Trouble codes are not stored. However, if the OBD II connector is used as an RPM source during the Smog Check, the MIL will illuminate. | Do not connect the OBD II connector until the analyzer prompts for the OBD II functional test. Use the conventional contact or non-contact method to obtain an rpm signal. |
| Mercedes-Benz | 2001-2003 | All models | No communication with some Snap-On EIS. | Snap-On produces a revised chip that enables communication. If your Snap-On EIS does not use the revised chip, do not inspect these vehicles; they will NOT communicate. Refer the motorist to another station for inspection. |
| Mitsubishi | 1996-1997 | Diamante, 3000GT, 3000GT Spyder, Montero, and Montero Sport, all equipped with 3.0L or 3.5L V6 engines. | All monitors reset to "incomplete" upon ignition key-off if all monitors set to "complete" prior to ignition off. | The EIS ignores monitor status. The Smog Check OBD readiness criteria for these vehicles allow all monitors to be incomplete. |
| Mitsubishi | 1996 | All models (Montero most commonly affected) | A defect in these systems causes the MIL to be commanded on without setting any DTCs. ARB believes that only a small population of Mitsubishi vehicles produced early for the 1996 model-year is affected by this problem. | Manufacturer recall in effect; refer to dealer for Mitsubishi recall #EMR-02-01. |
| Mitsubishi | 1996-2001 | Montero, Montero Sport, Diamante, 3000GT, Mirage, Galant, Expo/Expo LRV, and Eclipse models (except 2.0L non-turbo 420A engine models) | Some monitors are difficult to set to "complete." | Mitsubishi provides recommended drive cycles in its service information to assist technicians to operate monitors. Mitsubishi Technical Service Bulletin #TSB-00-13-005 (incl. drive cycle for 1996-1997MY affected vehicles only). See service manual for 1998-2001 drive cycles. |
| Nissan | 1996-1997 | All Models | The catalyst and evaporative monitors are difficult to set to "complete." | Nissan provides recommended drive cycles (drive patterns) in its service information to assist technicians to operate monitors. See Nissan Technical Service Bulletin #NTB98-018c, January 3, 2002. |
| Plymouth | 1996 | Breeze Neon | All monitors reset to "incomplete" upon <u>every</u> ignition key-off. | A manufacturer recall is in effect. Verify recall has been performed. If not, refer to dealer for the recall. |
| Table 1 continued on next page... | | | | |

TABLE 1 – OBD II Testability Issues

| Make | Model Year | Model | Problem | Action |
|---------------------|------------|----------------------------------|--|--|
| Saab | 1996-1998 | 900 (B234i with Motronic 4.1) | All monitors are difficult to set to “complete.” | Saab Service Instruction No. 248 describes the correct drive cycle for completion of the monitors. |
| Saab | 1996-1998 | All Models | The catalyst and evaporative monitors are difficult to set to “complete.” | The Smog Check OBD readiness criteria for this vehicle allow two monitors to be incomplete. |
| Subaru | 1996 | All Models | All monitors reset to “incomplete” upon <u>every</u> ignition key-off. | Via the vehicle look-up process, the test analyzer automatically ignores monitor status; the monitors are not used for pass/fail decisions. |
| Toyota | 1997 | Tercel, Paseo | The evaporative monitor will never set to “complete.” | The Smog Check OBD readiness criteria for these vehicles allow two monitors to be incomplete. |
| Volkswagen and Audi | 1997-2002 | All models with non-OEM stereos | If the OEM stereo has been replaced with an aftermarket stereo, these vehicles may not communicate with OBD code scanners and may cause severe damage to code scanning tools. For more information, see VW Technical service bulletin 02-03 dated June 10, 2002. | BAR recommends that you check with your analyzer/scan tool manufacturer to determine whether or not your analyzer/scan tool has complete current/voltage override protection. Override protection will protect the test equipment in cases where aftermarket installations cause over current conditions. BAR's June 22, 2002 ET Blast provides a method of checking for over current conditions using a test light. An alternative is to send all 96-newer VW/Audis with non-OEM radio installations to a VW/Audi dealership for verification of proper OBD function. |
| Volvo | 1996 | 850 Turbo | All monitors reset to “incomplete” upon <u>every</u> ignition key-off. | Via VID communication, the test analyzer ignores monitor status; the monitors are not used for pass/fail decisions. |
| Volvo | 1996-1998 | All Models except 1996 850 Turbo | Some monitors are difficult to set to “complete.” | Volvo provides drive cycles in its service information to assist technicians to operate monitors. See Volvo Technical Service Bulletin #SB 2-23-0059 (7/2002). |
| | | | | End table 1. |

TABLE 2 – Vehicles Currently Not OBD II Testable

The following vehicles use an OBD II protocol, known as Controller Area Network (CAN), that will not currently communicate with the EIS. Once the BAR-97 EIS incorporates CAN communication protocol, these vehicles will become testable and this table will be removed from Appendix J.

| Model Year | Make | Model | Issue |
|-------------------|--------------|--|--|
| 2003 | | | |
| 2003 | Ford | 2.3L A/T Focus, 2.3L M/T Focus, 3.9L Thunderbird | Uses CAN, currently incompatible with EIS. |
| 2003 | Lincoln | 3.0L A/T LS, 3.9L A/T LS | Uses CAN, currently incompatible with EIS. |
| 2003 | Mazda | 2.3L Mazda6, 3.0L Mazda6 | Uses CAN, currently incompatible with EIS. |
| 2003 | Porsche | Cayenne S, Cayenne Turbo | Uses CAN, currently incompatible with EIS. |
| 2003 | SAAB | 9-3 Sedan (175hp), 9-3 Sedan (210hp) | Uses CAN, currently incompatible with EIS. |
| 2003 | Saturn | Ion | Uses CAN, currently incompatible with EIS. |
| 2004 | | | |
| 2004 | Buick | Rendezvous | Uses CAN, currently incompatible with EIS. |
| 2004 | Cadillac | CTS, SRX, XLR | Uses CAN, currently incompatible with EIS. |
| 2004 | Dodge | Durango | Uses CAN, currently incompatible with EIS. |
| 2004 | Ford | Explorer, F-150, 2.3L Focus, Taurus, Thunderbird | Uses CAN, currently incompatible with EIS. |
| 2004 | Lexus | LS430 | Uses CAN, currently incompatible with EIS. |
| 2004 | Lincoln | LS | Uses CAN, currently incompatible with EIS. |
| 2004 | Mazda | Mazda3, Mazda6, RX8 | Uses CAN, currently incompatible with EIS. |
| 2004 | Mercury | Sable | Uses CAN, currently incompatible with EIS. |
| 2004 | Porsche | Cayenne S, Cayenne Turbo | Uses CAN, currently incompatible with EIS. |
| 2004 | Saab | 9-3 | Uses CAN, currently incompatible with EIS. |
| 2004 | Saturn | Ion | Uses CAN, currently incompatible with EIS. |
| 2004 | Toyota | Prius | Uses CAN, currently incompatible with EIS. |
| 2004 | Volvo | 2.4L S40, 2.5L S40 | Uses CAN, currently incompatible with EIS. |
| 2005 | | | |
| 2005 | Audi | A4, A6 | Uses CAN, currently incompatible with EIS. |
| 2005 | Aston Martin | DB9 | Uses CAN, currently incompatible with EIS. |
| 2005 | Buick | LaCrosse, Rainier, Rendezvous | Uses CAN, currently incompatible with EIS. |

| Model Year | Make | Model | Issue |
|-------------|--------------|---|--|
| 2005 | Cadillac | CTS, SRX, STS, XLR | Uses CAN, currently incompatible with EIS. |
| 2005 | Chevrolet | Cobalt, Corvette, Equinox, Malibu, SSR, Trailblazer EXT | Uses CAN, currently incompatible with EIS. |
| 2005 | Chrysler | 300C | Uses CAN, currently incompatible with EIS. |
| 2005 | Dodge | Dakota, Durango, Magnum | Uses CAN, currently incompatible with EIS. |
| 2005 | Ford | Crown Victoria, E-150, E-250, E-350, Escape, Excursion, Expedition, Explorer, F-150, F-250, F-350, Five Hundred, Focus, Freestyle, Mustang, Taurus, Thunderbird | Uses CAN, currently incompatible with EIS. |
| 2005 | GMC | Envoy ESV, Envoy XL | Uses CAN, currently incompatible with EIS. |
| 2005 | Isuzu | Ascender | Uses CAN, currently incompatible with EIS. |
| 2005 | Jeep | Grand Cherokee | Uses CAN, currently incompatible with EIS. |
| 2005 | Land Rover | LR3 | Uses CAN, currently incompatible with EIS. |
| 2005 | Lexus | LS400, LS430, GX470 | Uses CAN, currently incompatible with EIS. |
| 2005 | Lincoln | LS, Navigator, Town Car | Uses CAN, currently incompatible with EIS. |
| 2005 | Mazda | Mazda3, Mazda6, RX8, MPV, Tribute | Uses CAN, currently incompatible with EIS. |
| 2005 | Mercedes | SLK350 | Uses CAN, currently incompatible with EIS. |
| 2005 | Mercury | Grand Marquis, Mariner, Montego, Sable | Uses CAN, currently incompatible with EIS. |
| 2005 | Pontiac | G6, Grand Prix, GTO | Uses CAN, currently incompatible with EIS. |
| 2005 | Porsche | Cayenne S, Cayenne Turbo | Uses CAN, currently incompatible with EIS. |
| 2005 | Saab | 9-3, 9-7X | Uses CAN, currently incompatible with EIS. |
| 2005 | Saturn | Ion | Uses CAN, currently incompatible with EIS. |
| 2005 | Toyota | Avalon, Tacoma, 4Runner, Tundra, Sequoia | Uses CAN, currently incompatible with EIS. |
| 2005 | Volvo | S40, V50, S60, V70, S80, XC90 | Uses CAN, currently incompatible with EIS. |
| 2006 | | | |
| 2006 | Aston Martin | V8 Vantage | Uses CAN, currently incompatible with EIS. |
| 2006 | Ford | Five Hundred, Crown Victoria, E250, E360, Escape, E Series Econoline, Expedition, Explorer, F150, F350, Focus, Freestar, Freestyle, Fusion, Mustang, Taurus | Uses CAN, currently incompatible with EIS. |
| 2006 | Lincoln | LS, Mark LT, Navigator, Town Car | Uses CAN, currently incompatible with EIS. |
| 2006 | Mercury | Grand Marquis, Mariner, Milan, Montego, Monterey Wagon, Mountaineer, Sable, Zephyr | Uses CAN, currently incompatible with EIS. |
| 2006 | Buick | LaCrosse, Lucerne, Rainier, Rendezvous, Terraza Mini Van | Uses CAN, currently incompatible with EIS. |

| Model Year | Make | Model | Issue |
|--------------|------------|---|--|
| 2006 | Cadillac | CTS, DTS, SRX, STS, XLR | Uses CAN, currently incompatible with EIS. |
| 2006 | Chevrolet | Cobalt, Corvette, Equinox, Express, HHR, Impala, Malibu, Monte Carlo, SSR, TrailBlazer, Uplander Mini Van | Uses CAN, currently incompatible with EIS. |
| 2006 | GMC | Envoy, Savana Mini Van, Sierra | Uses CAN, currently incompatible with EIS. |
| 2006 | Pontiac | G6, Grand Prix, GTO, Montana Mini Van, Solstice, Torrent | Uses CAN, currently incompatible with EIS. |
| 2006 | Saab | 9-3, 9-7X | Uses CAN, currently incompatible with EIS. |
| 2006 | Saturn | Ion, Relay Mini Van | Uses CAN, currently incompatible with EIS. |
| 2006 | Honda | Civic, Civic Hybrid, Civic Si, Civic GX (CNG) | Uses CAN, currently incompatible with EIS. |
| 2006 | Mazda | Mazda 3, Mazda 5 Mini Van, Mazda 6, Mazdaspeed 6, MPV Mini Van, MX-5, RX-8, Tribute | Uses CAN, currently incompatible with EIS. |
| 2006 | Mitsubishi | Eclipse, Galant, Raider | Uses CAN, currently incompatible with EIS. |
| 2006 | Lexus | GS430, GX470, IS250, IS350, LS430, LX470, SC430 | Uses CAN, currently incompatible with EIS. |
| 2006 | Toyota | Land Cruiser, RAV4, Scion, Sequoia, Solara, Tacoma, Tundra, Yaris | Uses CAN, currently incompatible with EIS. |
| 2006 | Volvo | C70, S40, S60, S80, V50, V70, XC70, XC90 | Uses CAN, currently incompatible with EIS. |
| 2006 | Volkswagen | Jetta, GTI, Passat Sedan | Uses CAN, currently incompatible with EIS. |
| 2007 | | | |
| 2007 | BMW | X5 | Uses CAN, currently incompatible with EIS. |
| 2007 | Porsche | 911 Turbo | Uses CAN, currently incompatible with EIS. |
| 2007 | Saab | B9 Tribeca | Uses CAN, currently incompatible with EIS. |
| 2007 | Lexus | ES350, LS460, RX350 | Uses CAN, currently incompatible with EIS. |
| 2007 | Mini | Cooper | Uses CAN, currently incompatible with EIS. |
| 2007 | Toyota | Camry, FJ Cruiser, Solara, Yaris | Uses CAN, currently incompatible with EIS. |
| 2007 | Volvo | C70, S40, S60, S80, V50, V70, XC70, XC90 | Uses CAN, currently incompatible with EIS. |
| 2007 | Volkswagen | Passat, Passat Wagon | Uses CAN, currently incompatible with EIS. |
| end table 2. | | | |